

Fast Ethernet Broadband Router

BR-6314K User Manual

Version 1.0 / July, 2009



FCC Warning

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limitations are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.
- *Increase the separation between the equipment and receiver.
- *Connect the equipment into a different outlet from that the receiver is connected.
- *Consult your local distributors or an experienced radio/TV technician for help.
- *Shielded interface cables must be used in order to comply with emission limits

Notice

Changes or modifications to the equipment, which are not approved by the party responsible for compliance could affect the user's authority to operate the equipment.

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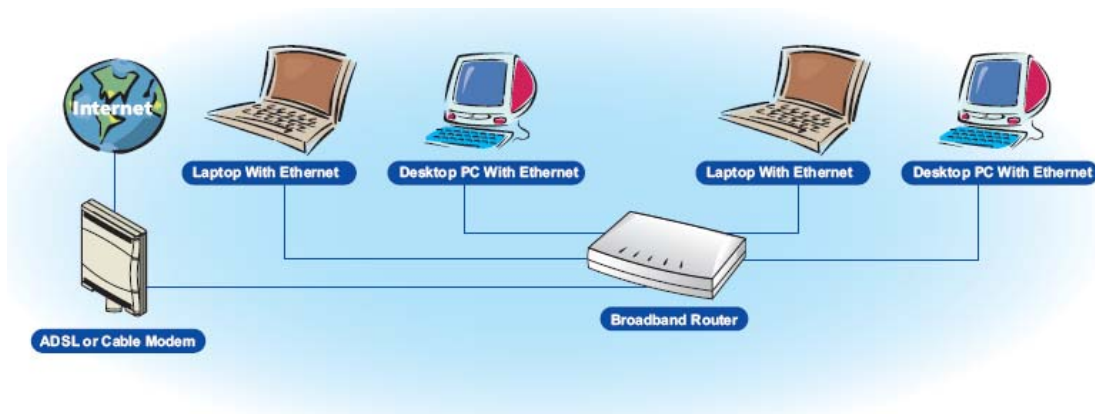
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1. Introduction

Congratulations on purchasing the Broadband Router. This Broadband Router, is a high quality and reliable Internet routing device, enables multiple users to share the Broadband Internet connection through a Cable or DSL modem. Simply install the router, connect to Cable/DSL modem, and surf Internet without extra efforts. Acting as a 10/100Mbps 4-port Ethernet switch as well, the router, with all ports supporting MDI/MDIX, allows you to use CAT5 cable to uplink to other routers/switches. The Broadband Router provides a total solution for the Small and Medium-sized Business (SMB) and the Small Office/Home Office (SOHO) markets, giving you an instant network today, and the flexibility to handle tomorrow's expansion and speed.



1.1 Features

Internet Access Features

- Shared Internet Access: All users on the LAN can access the Internet through the Broadband Router, using only a single external IP address. The local (invalid) IP addresses are hidden from external sources. This process is called NAT (Network Address Translation).
- DSL and cable modem Support: The Broadband Router has a 10/100BaseT Ethernet WAN port for connecting a DSL or cable modem. All popular DSL and cable modems are supported.
- PPPoE and PPTP Support: The Internet (WAN port) connection supports PPPoE (PPP over Ethernet) and PPTP (Point-to-Point Tunneling Protocol), as well as "Direct Connection" type services.
- Fixed or Dynamic IP Address: On the Internet (WAN port) connection, the Broadband Router supports both Dynamic IP address (IP address is allocated on connection) and Fixed IP address.

Advanced Internet Functions

- Conferencing & Telephony Applications: Internet Telephony and Conferencing applications are supported.
- DMZ: One PC on your local LAN can be configured to allow unrestricted 2-way communication with Servers or individual users on the Internet.
- URL Filter: Use the URL Filter to block access to undesirable Web sites by LAN users.
- Internet Access Log: This feature is used to verify which Internet connections have been made.

LAN Features

- 4-Port Ethernet Switch: The Broadband Router provides 4 10/100Base-T switching ports.
- Standard Compliance: The Broadband Router complies with the IEEE 802.3x full duplex flow control.
- DHCP Server Support: This feature provides a dynamic IP address to PCs and other devices upon request. The Broadband Router can act as a DHCP Server for devices on your local LAN.

- Multi Segment LAN Support: This feature is enabled through Broadband Router's RIP (Routing Information Protocol) and build-in static routing table.

Configuration and Management

- Easy Setup: Users allow to configure Broadband Router from anywhere on the LAN via web browser.
- Remote Management: The Broadband Router can be managed from any PC on the LAN.
- UPnP Support: Universal Plug and Play feature. UPnP is supported by Windows ME or later.

Security Features

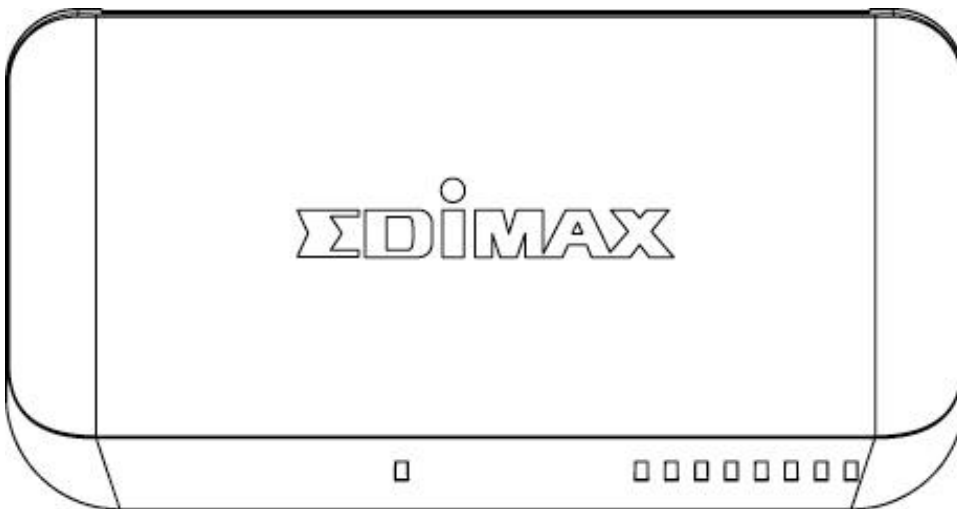
- Password Protected Configuration: Optional password protection is provided to prevent unauthorized users from modifying the configuration data and settings.
- NAT Protection: This feature allows all LAN users to share a single IP address and all users' IPs are hidden. From the external viewpoint, there is no network only the Broadband Router exists.
- Firewall: All incoming data packets are monitored and all incoming server requests are filtered.

1.2 Package Contents

- One Broadband Router
- One External Power adapter
- One CD including user's manual

1.3 LEDs Indication & Connectors of Broadband Router

Front Panel LEDs Indication

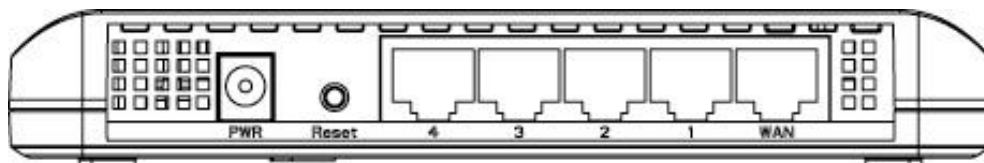


LED Light Status Description

LED	Light Status	Description
PWR	On (Steady Green)	Broadband Router is powered on.
	Off	No power
Status	On (Steady Green)	System is hung.
	Flashing	Broadband Router is up and ready.
LAN (1, 2, 3, 4)	On (Steady Amber)	LAN port is successfully connected.
	Flashing	Data is being sent or received.

WAN	On (Steady Amber)	WAN port is successfully connected
	Flashing	Data is being sent or received.

Back Panel Connectors



Button/port Description

Button/port	Description
Reset	Reset configurations to default. Press the button and hold for 10 seconds.
1x, 2x, 3x, 4x	LAN Ports. Connect LAN systems with RJ-45 cable.
WAN	WAN port. Connect DSL or Cable modem.
PWR	Power jack. Connect with AC power adapter.

1.4 System Requirements

- One or more PCs (desktop or notebook) with Ethernet interface.
- TCP/IP protocol must be installed on all PCs.
- Have valid Internet Access account and a DSL or cable modem.
- 10/100BaseT network cables with RJ-45 connectors.
- System with MS Internet Explorer ver. 6.0 or later.

1.5 Installation Instruction

- 1) Power off Broadband Router and DSL/cable modem.
- 2) Connect systems to the LAN ports on the Broadband Router with straight LAN cables.
- 3) Connect the DSL or cable modem to the WAN port on the Broadband Router.
- 4) Power on DSL or cable modem first, then connect power adapter to the power jack on the Broadband Router and plug the power cable into an outlet.
- 5) Check LEDs.
 - a) Once power on the Broadband Router, Power LED should be on.
 - b) LAN LED should be on for each active LAN connection.
 - c) The WAN LED should be on when the DSL or cable modem is connected.

Warning: Only use the power adapter is provided from this package, use other power adapter may cause hardware damage

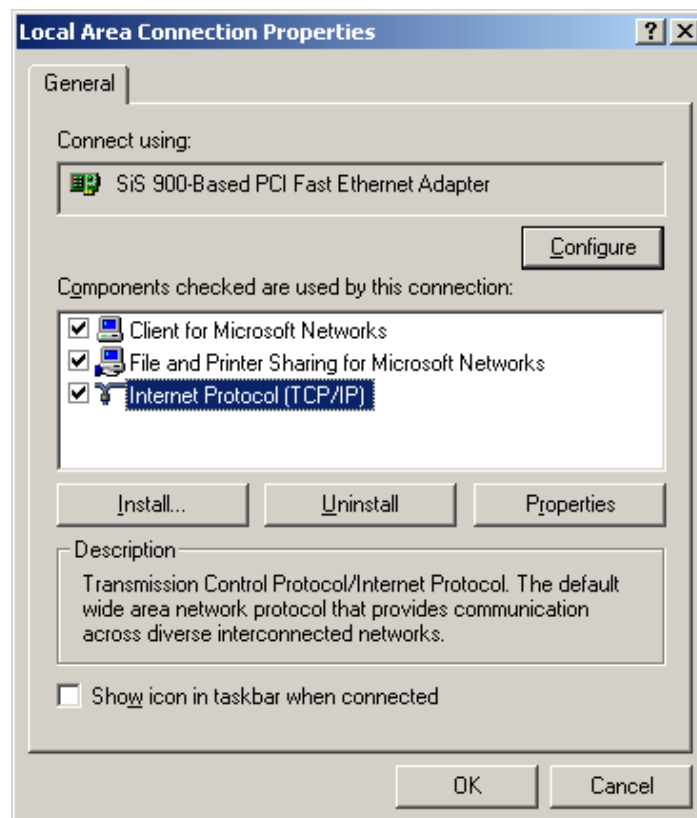
2. PC Configuration

User needs to configure TCP/IP network settings, Internet access configuration for each system within the Broadband Router's LAN network. By default, the Broadband Router acts as a DHCP server for server version of Windows, it automatically assigns IP address to each system when systems boot up. For all non-server version of Windows, the default TCP/IP setting acts as a DHCP client. If user chooses fixed IP addresses for client systems, the Gateway of the client system must be set to the IP address of the Broadband Router and DNS of the client system should be set to the address provided by your ISP.

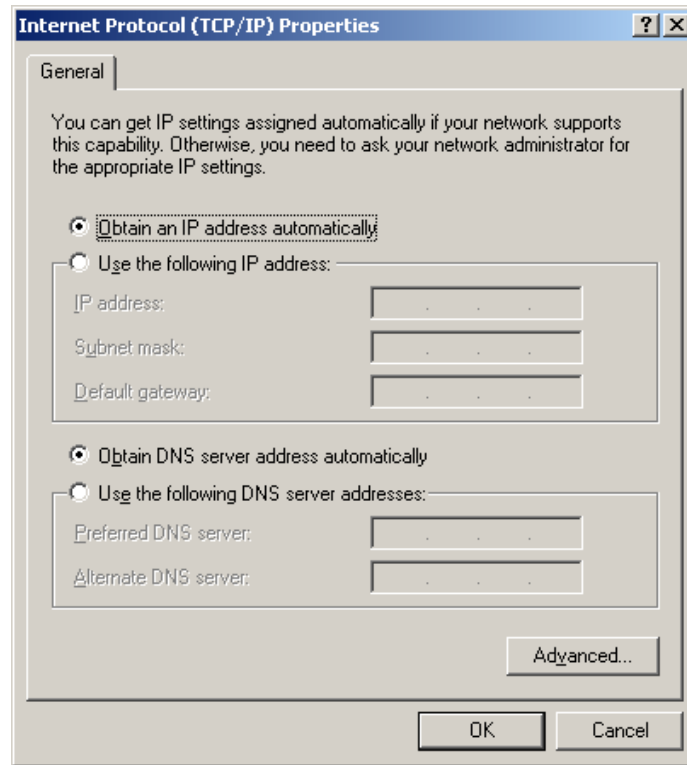
2.1 TCP/IP Networking

Checking TCP/IP Settings for Windows 2000

- a) Select “**Start → Control Panel → Network and Dial-up Connection**” and right click “**Local Area Connection**” then click “**Properties**”,



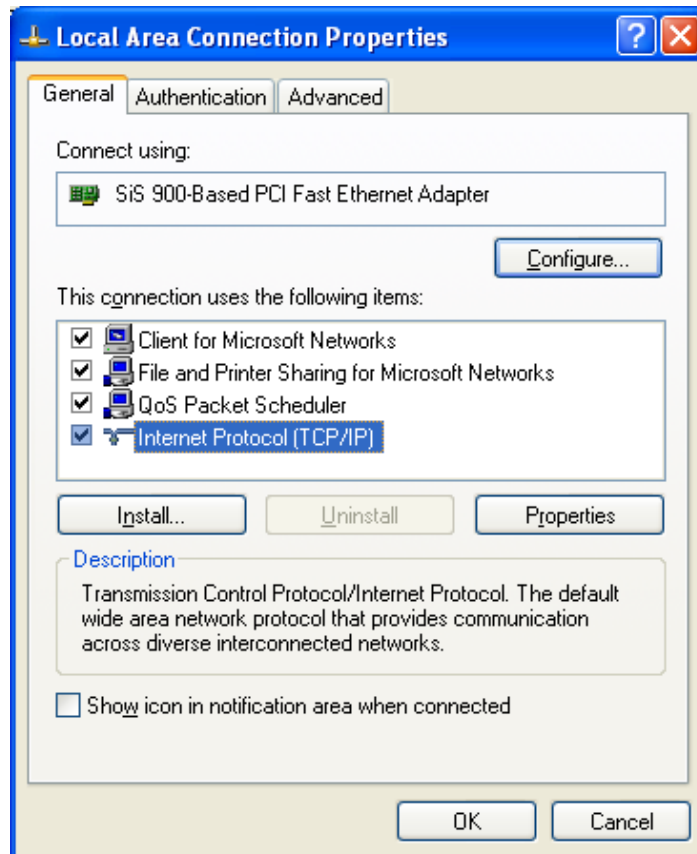
- b) Select the “**Internet Protocol (TCP/IP)**” for the network card on your system, then click “**Properties**”, window below will appear.



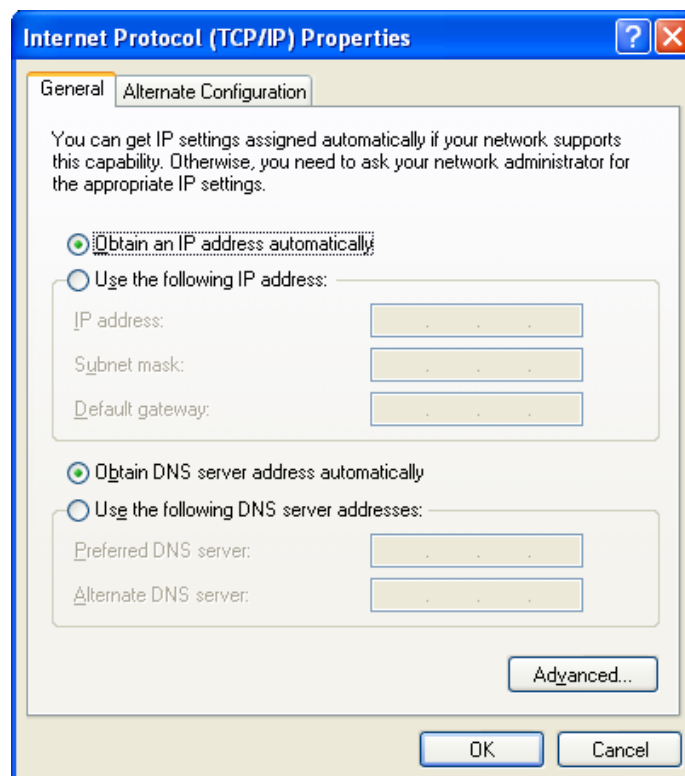
- If you decide to use IP address from Wireless Router, select **“Obtain an IP address automatically”**.
- If you decide to use the IP address you are desired, select **“Use the following IP address”**. Make sure enter correct addresses in **“IP Address”** and **“Subnet Mask”** fields.
- You must set Wireless Router’s IP address as **“Default Gateway”**.
- If the DNS Server fields are empty, select **“Use the following DNS server addresses”** and enter the DNS address is provided by your ISP, then click **“OK”**.

Checking TCP/IP Settings for Windows XP

- a) Click **“Start”**, select **“Control Panel → Network Connection”** and right click **“Local Area Connection”** then select **“Properties”**, window below will appear.



b) Select “Internet Protocol (TCP/IP)” then click “Properties”, window below will appear.

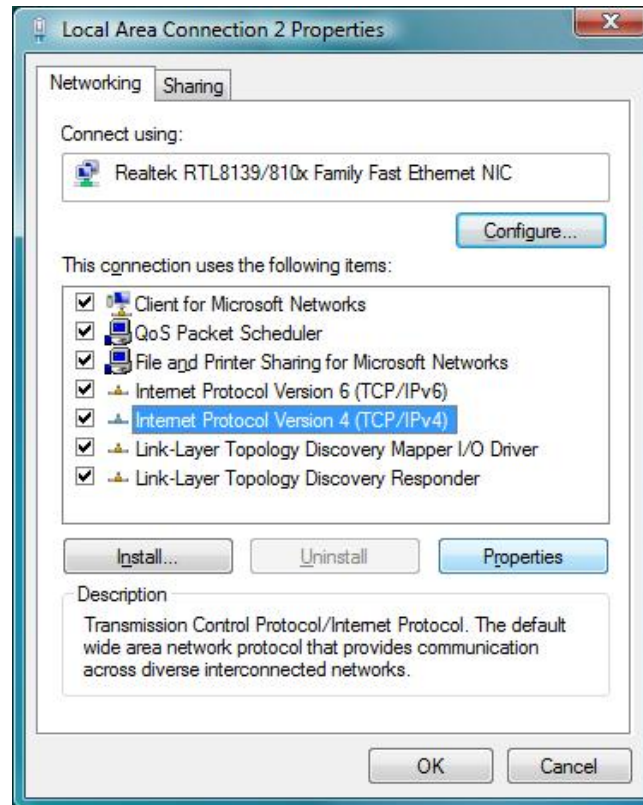


- If you decide to use IP address from Wireless Router, select “**Obtain an IP address automatically**”.
- If you decide to use the IP address you are desired, select “**Use the following IP address**”. Make sure enter correct addresses in “**IP Address**” and “**Subnet Mask**” fields.
- You must set Wireless Router’s IP address as “**Default Gateway**”.

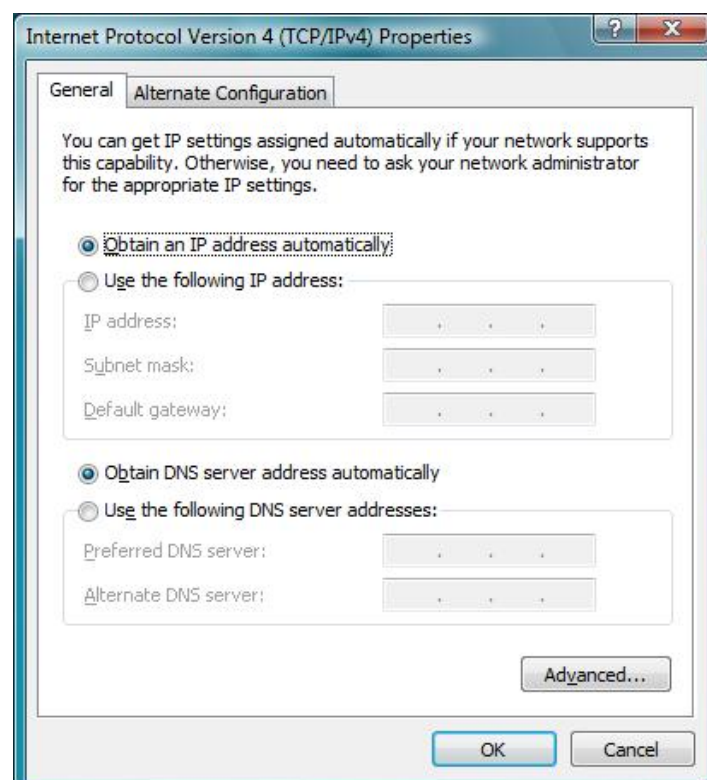
- If the DNS Server fields are empty, select **“Use the following DNS server addresses”** and enter the DNS address is provided by your ISP, then click **“OK”**.

Checking TCP/IP Settings for Windows Vista

- a) Click **“Start”** → **“Control Panel”** → **“Manage Network Connections”** and right click **“Local Area Connection”** then select **“Properties”**, window below will appear.



- b) Select **“Internet Protocol (TCP/IP)”** then click **“Properties”**, window below will appear.



- If you decide to use IP address from Wireless Router, select **“Obtain an IP address automatically”**.

- If you decide to use the IP address you are desired, select **“Use the following IP address”**. Make sure enter correct addresses in **“IP Address”** and **“Subnet Mask”** fields.
- You must set Wireless Router’s IP address as **“Default Gateway”**.
- If the DNS Server fields are empty, select **“Use the following DNS server addresses”** and enter the DNS address is provided by your ISP, then click **“OK”**.

3. Setup Broadband Router Configurations via Web Browser

The Broadband Router comes with a web-based configuration utility. Users can access this configuration utility from any of client system within Broadband Router's LAN. For best results, either use Microsoft Internet Explorer 6.0 or later.

Before you start configuring your Broadband Router, you have to get following information from your ISP:

- a) Has your ISP assigned you a static IP address, or they will assign one to you dynamically? If you have received a static IP address, what is it?
- b) Does your ISP use PPPoE? If so, what is your PPPoE username and password?

If you are not sure of above questions, please contact your ISP.

3.1 Start your Web Browser

To use the Web-Based Utility, you have to launch your Internet Browser (MS IE 6.0 or later).

Step1: Enter Broadband Router default IP address <http://192.168.2.1> in the Address field then hit Enter key:



Step2: Login dialog box will appear, enter **admin** as User Name and default password is 1234, then click "OK" to login web-based utility.

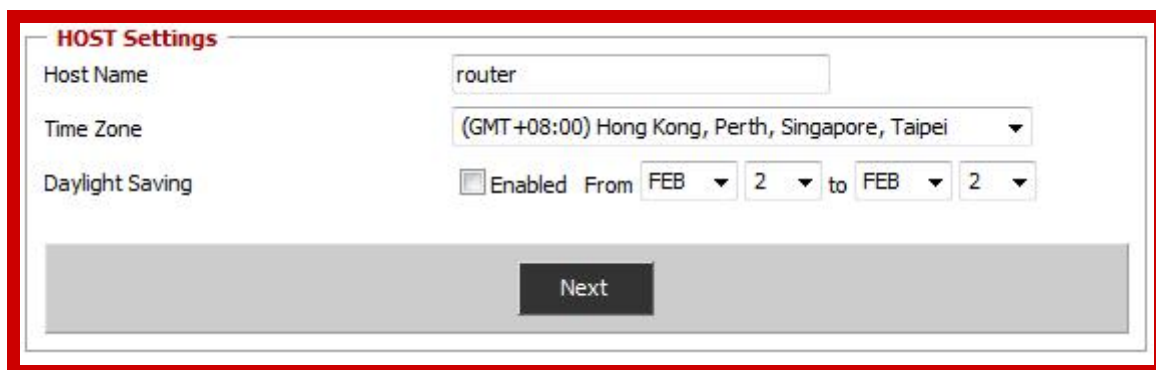


3.2 Quick Setup

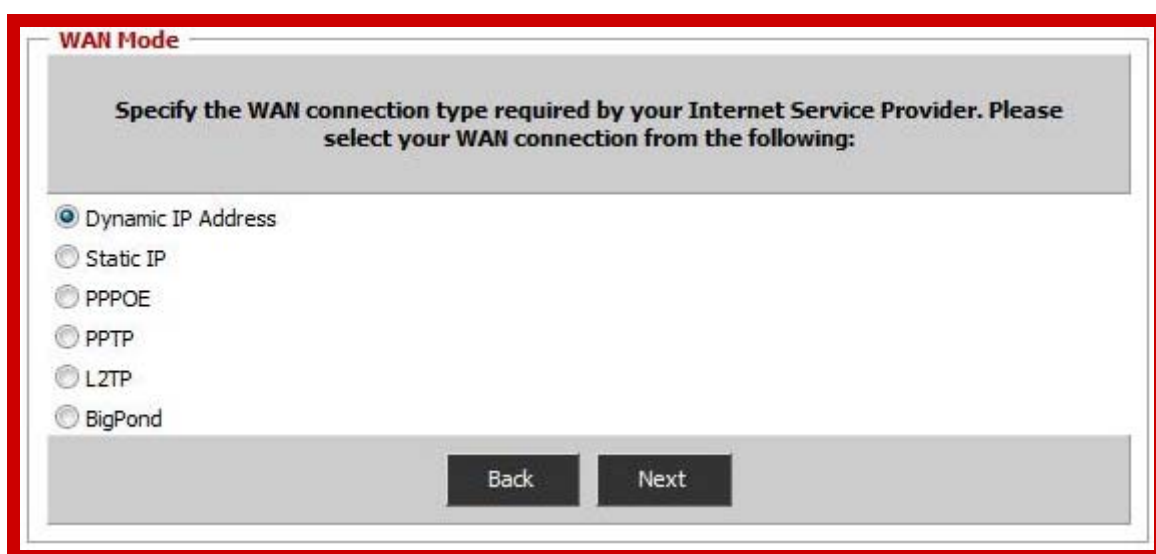
Quick Setup will help you setup the Broadband Router quickly. There have six types of WAN Connections: Dynamic IP Address, Static IP, PPPoE, PPTP, L2TP, and BigPond.

When configure the Quick Setup wizard, you can setup Host Settings, such as Host name, Time Zone, and Daylight

Saving as below. Click “**Next**” to continue.



After specify the WAN connection type required by your ISP, please follow the next steps to configure DHCP and DNS settings to complete the wizard.



Dynamic IP address: Obtain an IP address automatically from your service provider.

Static IP: Use Static IP address to access Network, your ISP will provide a static IP address.

PPPOE: PPPoE is a common connection type used for xDSL.

PPTP: PPP Tunneling Protocol can support multi-protocol Virtual Private Network (VPN)

L2TP: Layer 2 Tunneling Protocol can support multi-protocol Virtual Private Network (VPN)

BigPond: BigPond is an Australian internet service provider and is a subsidiary of Telstra.

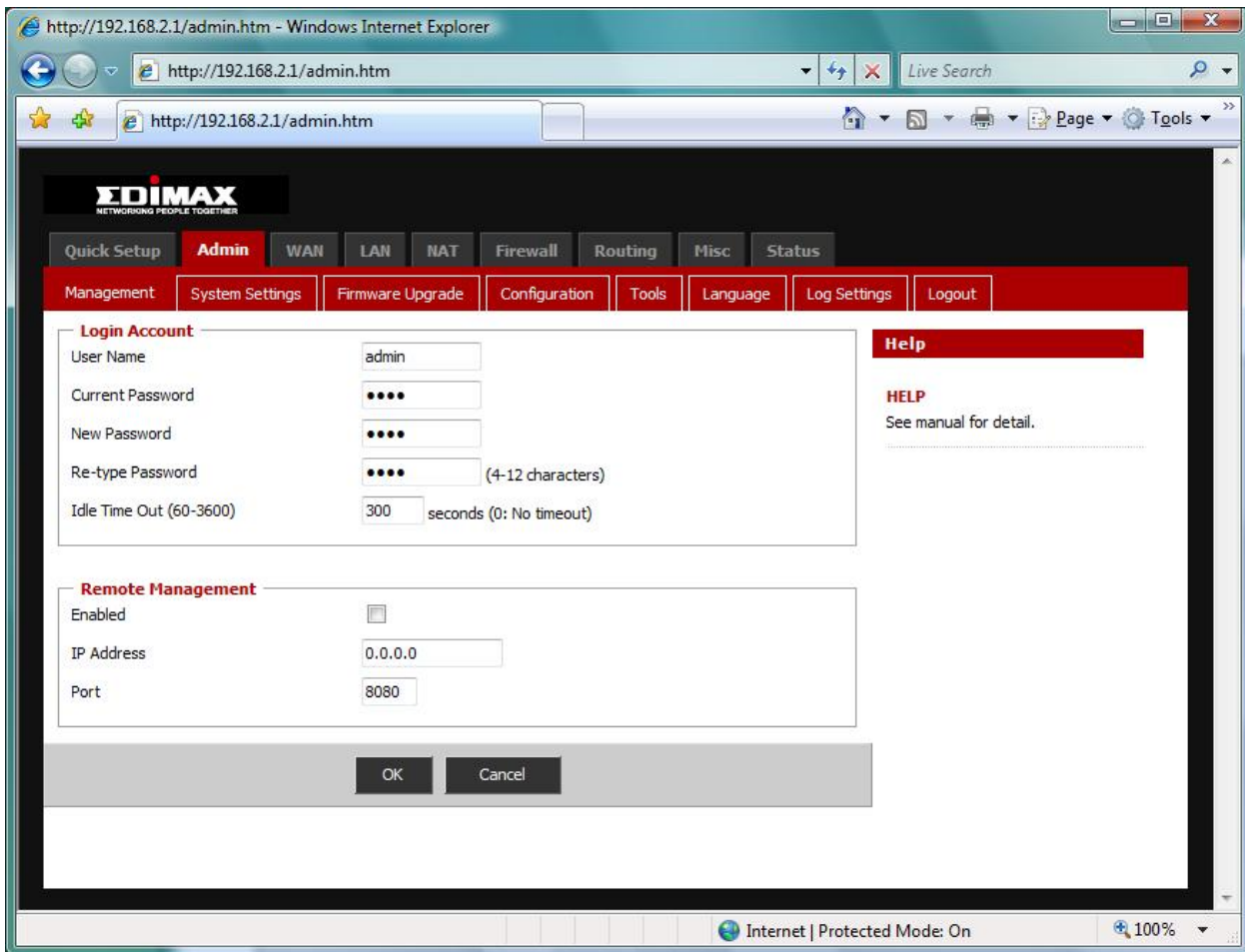
3.3 Administrator

3.3.1 Management

Use this page to restrict management access based on a specific password. Passwords can contain from 4-12 alphanumeric characters, and are case sensitive.

Idle Time-out - The amount of time of inactivity before the Broadband Router will automatically close the Administrator session. Set this to zero to disable it. Default is **300**.

Remote Management - By default, management access is only available to users on your local network. However, you can also manage the Broadband Router from a remote host by adding the IP address of an administrator to this screen.

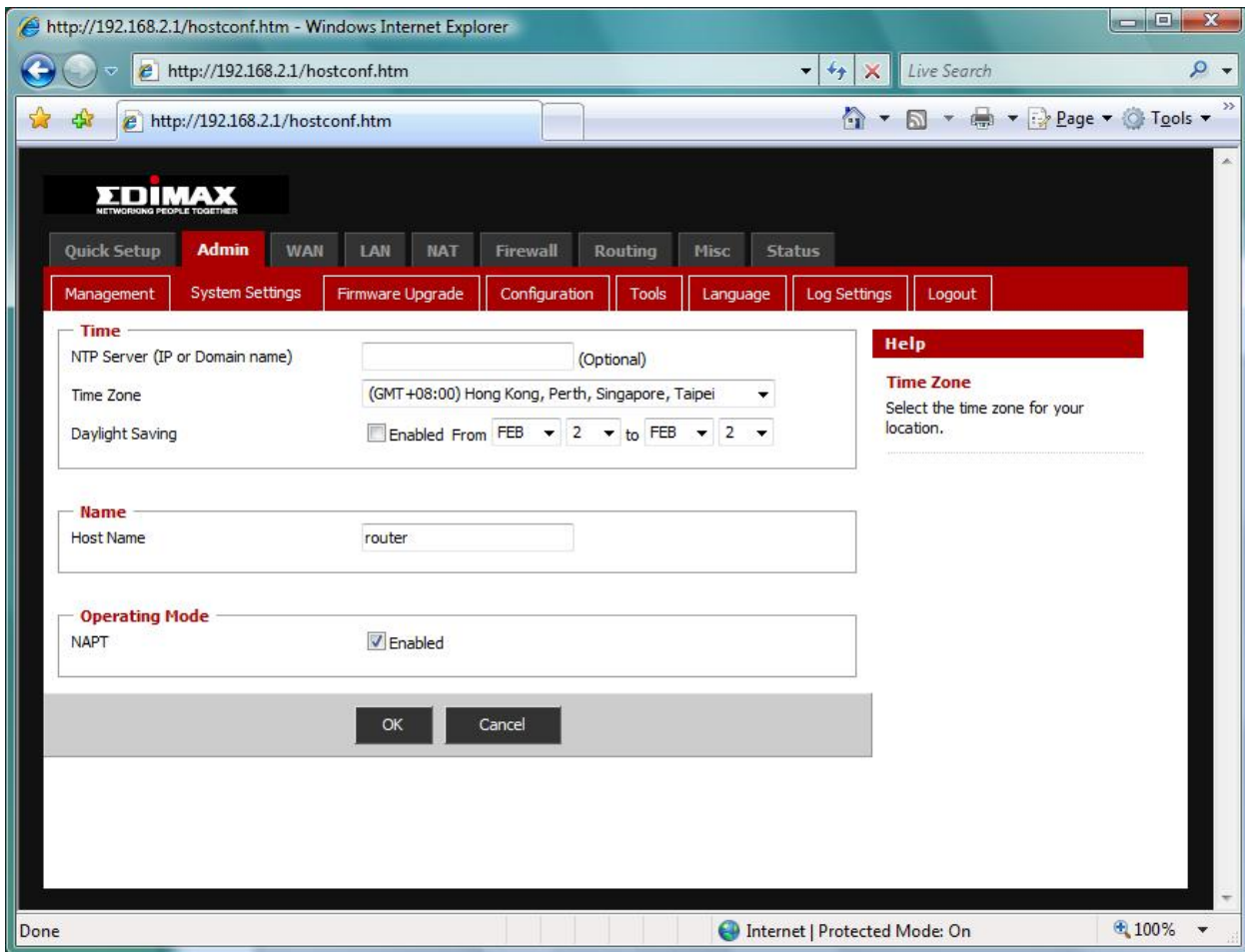


Login Account: Allows you to setup a password in order to access the web-based management website.

Remote Management: You can specify a Host IP address that can perform remote management functions.

3.3.2 System Settings

The System Settings window configures broadband router basic settings, such as router's Host Name, Set Time Zone, Daylight Saving and Operation Mode.



NTP Server (IP or Domain Name): Enter a Domain Name if it was provided by the ISP

Time Zone: Select the time zone of the country you are currently in. The router will set its time based on your selection.

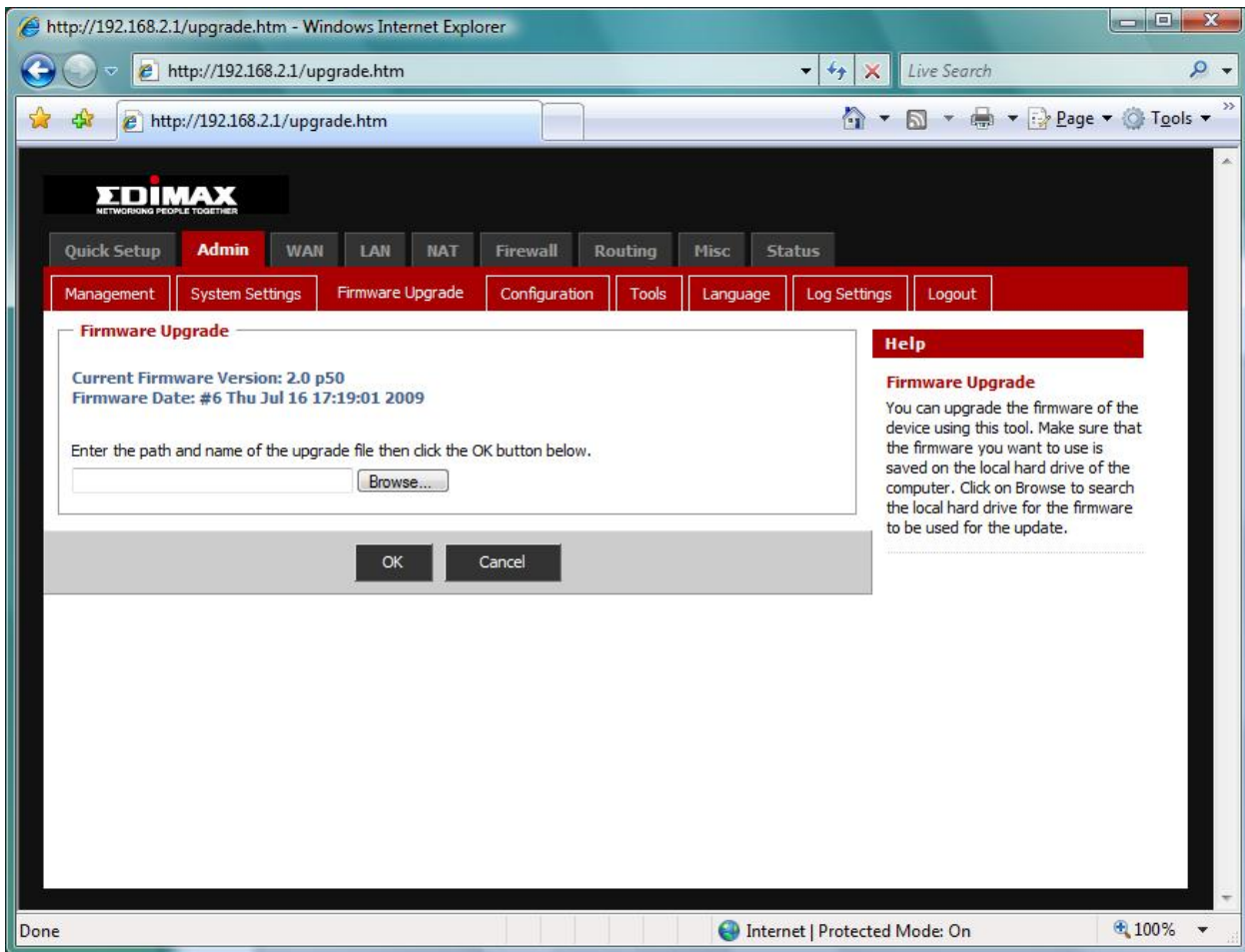
Daylight Saving: The router can also take Daylight savings into account. If you wish to use this function, you must check/tick the enable box to enable your daylight saving configuration.

Host Name: Enter a hostname if it was provided by the ISP (Default: **router**).

NAPT: You can select to enable NAPT function.

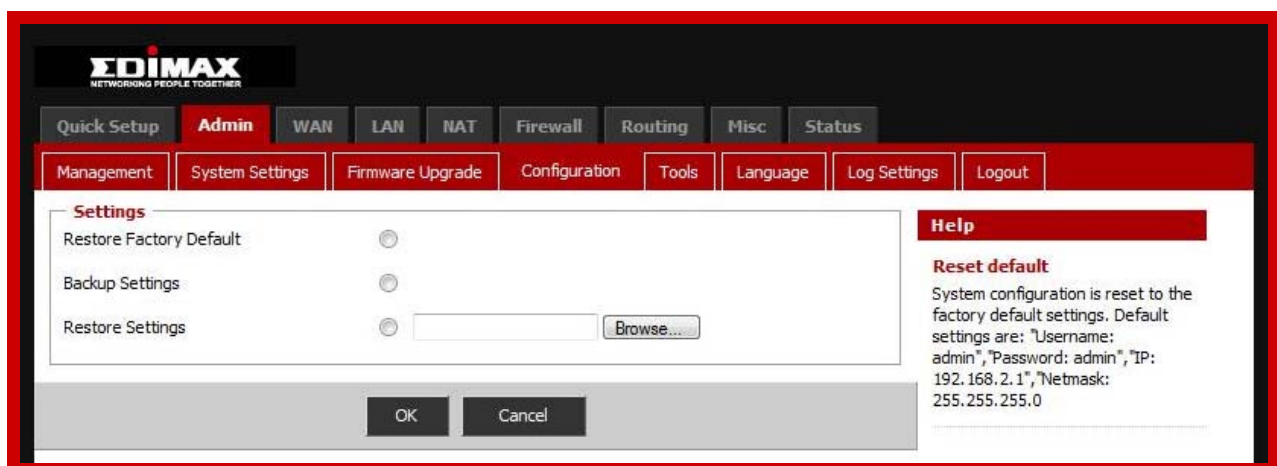
3.3.3 Firmware Upgrade

User uses the Firmware Upgrade window to locate the new firmware then upgrade the system firmware. Click **Browse...** to search for the new firmware location, and then click **OK** to precede the upgrade.



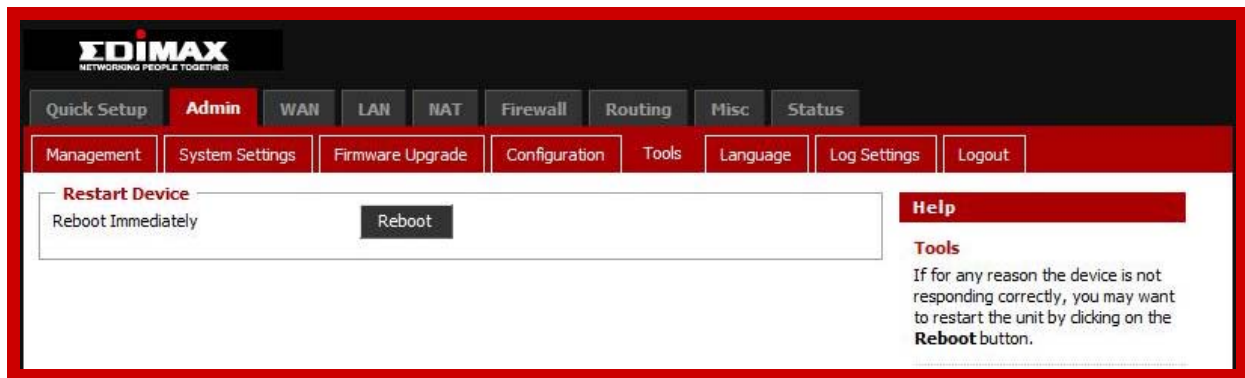
3.3.4 Configuration

Use this window to restore or backup broadband router settings, such as Restore Factory Default, Backup Settings and Restore Settings. The Factory Default settings are: "Username: **admin**", "Password: **1234**", "IP: **192.168.2.1**", "Natmask: **255.255.255.0**"



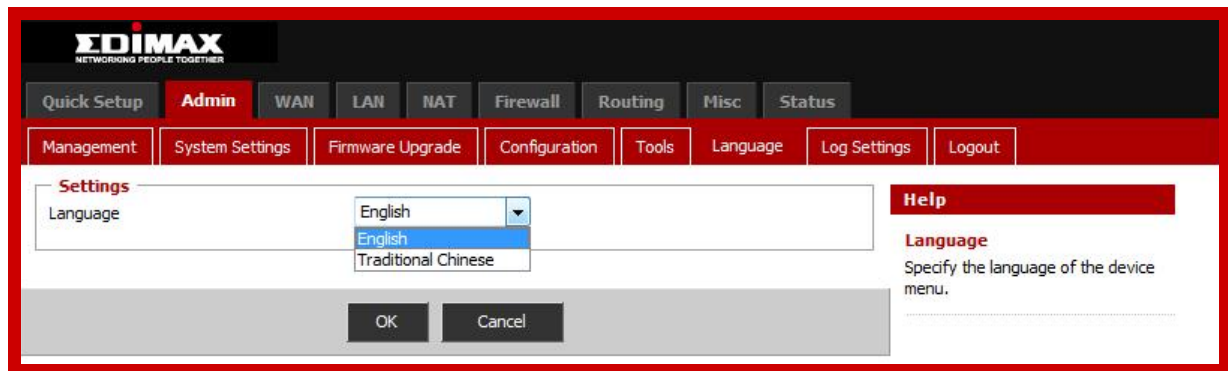
3.3.5 Tools

If for any reason the device is not responding correctly, you may want to restart the unit by clicking on the **Reboot** button.



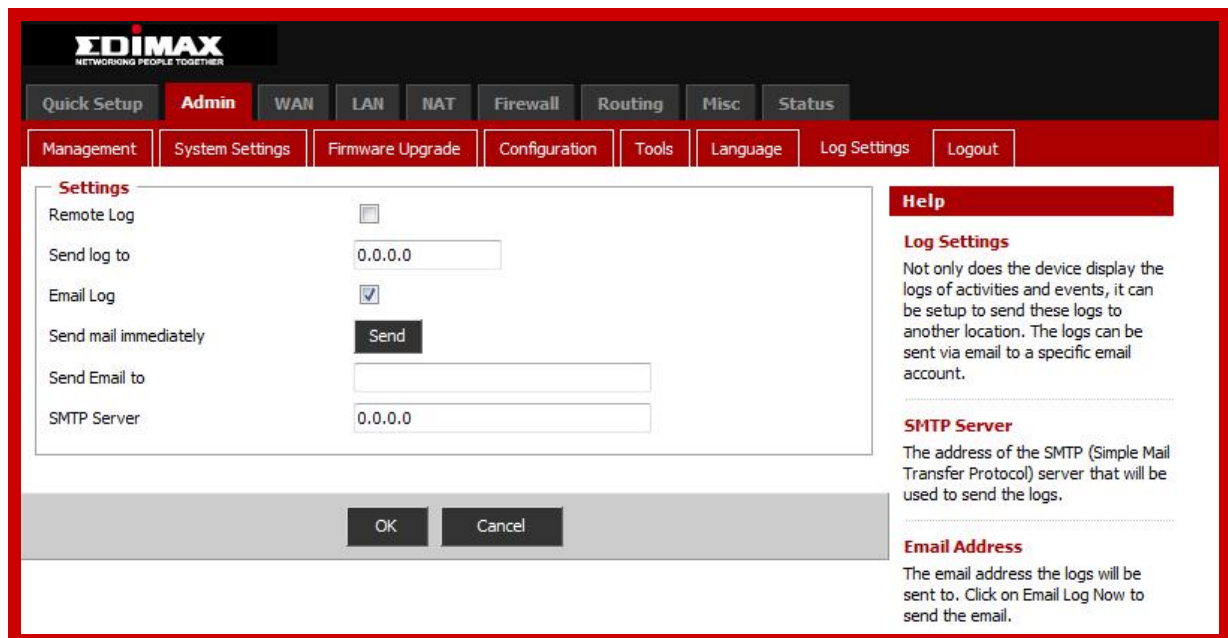
3.3.6 Language

Specify the language of the device menu. The two languages are supported in this router: **English** and **Traditional Chinese**.



3.3.7 Log Settings

Not only does the device display the logs of activities and events, it can be setup to send these logs to another location. The logs can be sent via email to a specific email account.

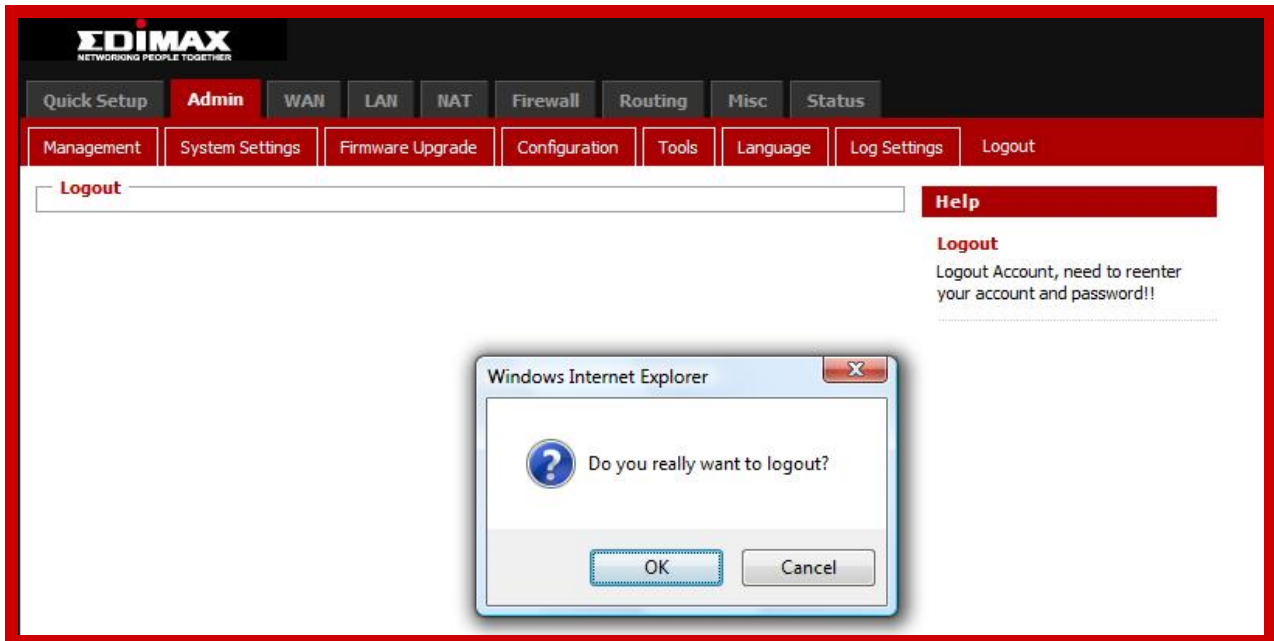


SMTP Server: The address of the SMTP (Simple Mail Transfer Protocol) server that will be used to send the logs.

Email Address: The email address the logs will be sent to. Click **Email Log** to send the email.

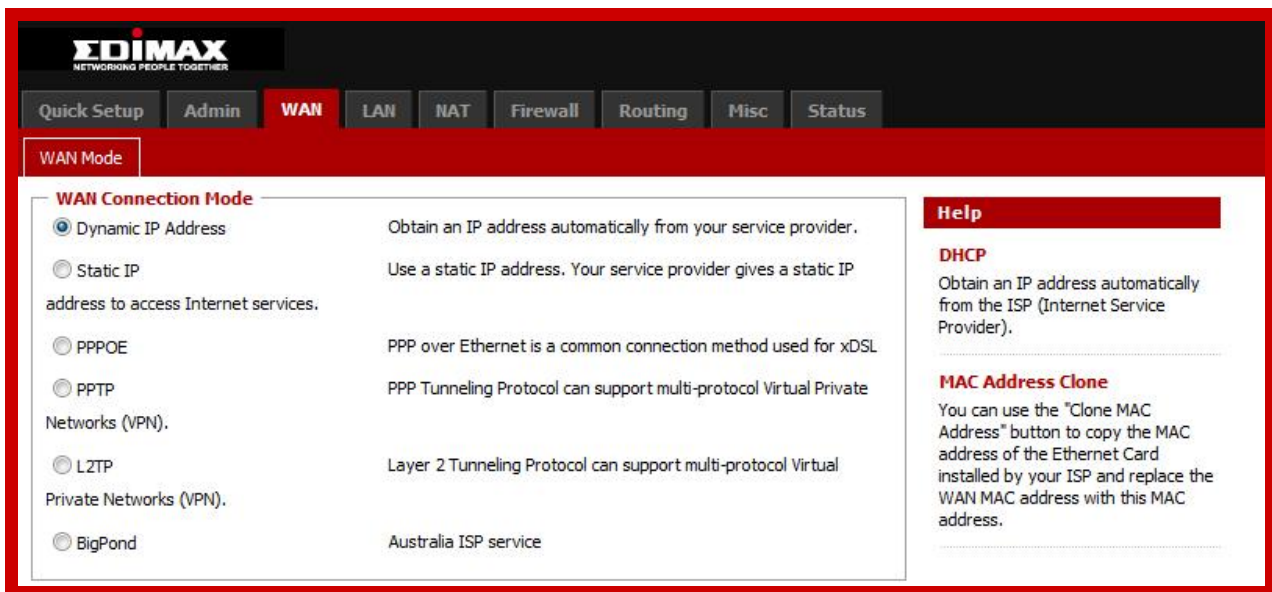
3.3.8 Logout

Click **Logout** in the task bar to initiate broadband router logout process.



3.4 WAN

Specify the WAN connection mode required by your Internet Service Provider, then click "OK" Button to provide detailed configuration parameters for the selected connection type.



(a) Dynamic IP address

Select this option if your ISP provides you an IP address automatically. This option is typically used for Cable services. Please enter the Dynamic IP information accordingly.

Dynamic IP Address

Request IP address

MTU(576-1500)

1500

Static DNS Server

☐

Primary DNS

Secondary DNS

(Optional)

MAC Cloning

☐ Enabled

MAC Address (XX:XX:XX:XX:XX:XX)

00:00:00:00:00:00

Clone MAC

DHCP: Obtain an IP address automatically from the ISP.

MAC Address Clone: You can use the “**Clone MAC Address**” button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with this MAC address.

(b) Static IP

The router's IP address and Subnet Mask are as seen by external user on the Internet (including your ISP). If your Internet connection requires a static IP address, then your ISP will provide you with a Static IP Address and Subnet Mask.

WAN Static IP

Static IP Address

IP Address

0.0.0.0

Subnet Mask

255.255.255.0

Gateway IP

0.0.0.0

MTU (576-1500)

1500

Static DNS Server

☒

Primary DNS

Secondary DNS

(Optional)

MAC Cloning

☐ Enabled

MAC Address (XX:XX:XX:XX:XX:XX)

00:00:00:00:00:00

Clone MAC

More IP addresses

Does ISP provide more IP addresses?

☐

IP address: IP address is given from your ISP.

Subnet Mask: Enter the subnet mask of the router.

Gateway Address: Enter the gateway address at ISP end.

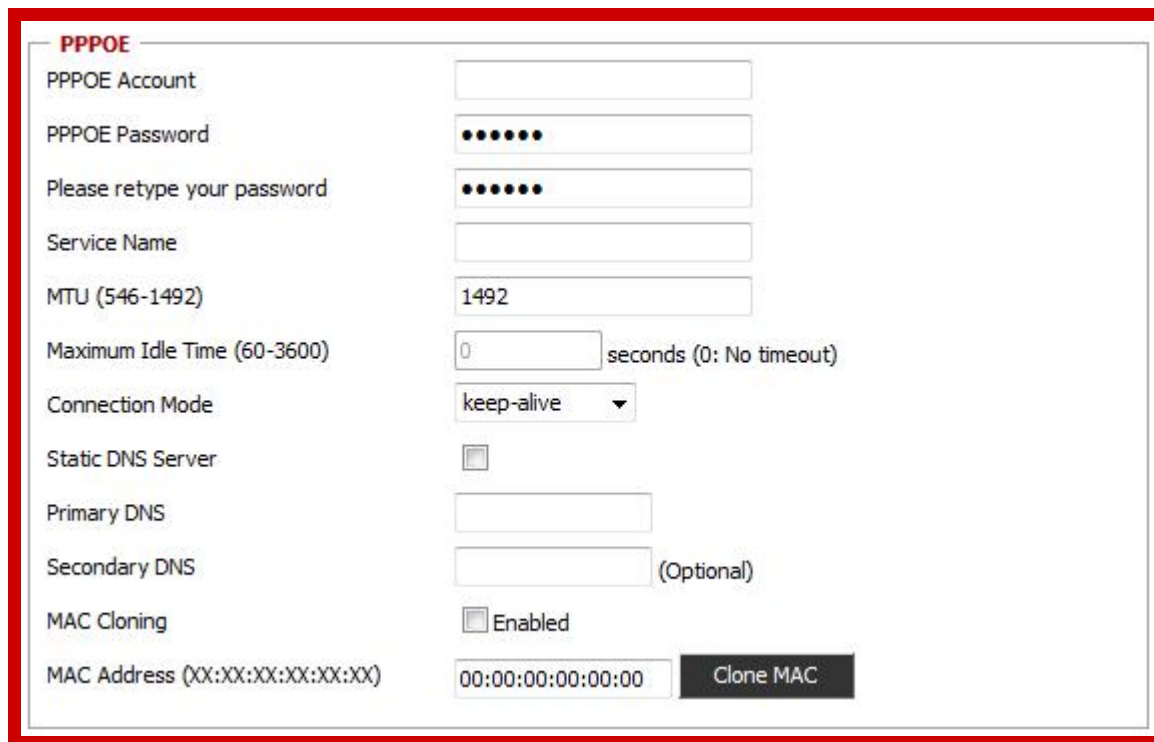
MTU (576-1500): You can specify the maximum size of your transmission packet to the Internet. Leave it as it is if you do not wish to set a maximum packet size.

Does ISP provide more IP address: If your ISP supports more IP addresses, please check it; otherwise, leave it

unchecked.

(c) PPPoE

PPP over Ethernet is a common connection method used for xDSL.



The screenshot shows a web-based configuration page for PPPoE. It features several input fields and a dropdown menu. The fields are: 'PPPOE Account' (text), 'PPPOE Password' (password, masked with dots), 'Please retype your password' (password, masked with dots), 'Service Name' (text), 'MTU (546-1492)' (text, value 1492), 'Maximum Idle Time (60-3600)' (text, value 0), 'Connection Mode' (dropdown, value 'keep-alive'), 'Static DNS Server' (checkbox, unchecked), 'Primary DNS' (text), 'Secondary DNS' (text, value '(Optional)'), 'MAC Cloning' (checkbox, checked), and 'MAC Address (XX:XX:XX:XX:XX:XX)' (text, value '00:00:00:00:00:00'). A 'Clone MAC' button is next to the MAC address field. The entire form is enclosed in a red border.

User Name and Password: Enter the User Name and Password you use when logging onto your ISP through a PPPoE or PPTP connection.

Service Name: optional. Input the service name if your ISP requires it. Otherwise, leave it blank.

Maximum Transmission Unit (MTU): Most ISP offers MTU value to users. The most common MTU value is 1492.

Maximum Idle Time: The amount of time of inactivity before disconnecting your PPPoE session. Set it to zero to disable this feature.

Connect on Demand: Configure the router to disconnect your Internet Connection after a specified period of inactivity (Max Idle Time). Connect on Demand enables the router to automatically re-establish your connection as soon as you attempt to access the Internet again.

Keep-Alive option: Keeps you connected to the Internet indefinitely, even when your connection sits idle.

(d) PPTP

PPP Tunneling protocol can support multi-protocol Virtual.

WAN PPTP

WAN Interface Settings

WAN Interface IP

Static IP ▼

IP Address

0.0.0.0

Subnet Mask

255.255.255.0

Gateway

0.0.0.0

Static DNS Server

☐

Primary DNS

Secondary DNS

(Optional)

MAC Cloning

☐ Enabled

MAC Address (XX:XX:XX:XX:XX:XX)

00:00:00:00:00:00

Clone MAC

PPTP Settings

PPTP Account

PPTP Password

••••••

Please retype your password

••••••

PPTP Server (IP or Domain name)

0.0.0.0

Connection ID

(Optional)

MTU (546-1460)

1460

Maximum Idle Time (60-3600)

300

seconds (0: No timeout)

Connection Mode

keep-alive ▼

MPPE

☐

PPTP: The Point-to-Point Tunneling Protocol (PPTP) is a method for implementing virtual private network.

Server: Specify IP Address of the PPTP Server.

IP Address and **Subnet Mask:** the private IP address and subnet mask your ISP assigned to you.

Connection ID: optional. Input the connection ID if your ISP requires it.

Maximum Idle Time: the time of no activity to disconnect your PPTP session. Set it to zero to disable this feature. If Auto-reconnect is enabled, this product will connect to ISP automatically, after system is restarted or connection is dropped

(e) L2TP

Layer 2 Tunneling protocol can support multi-protocol Virtual.

WAN L2TP

WAN Interface Settings

WAN Interface IP
Static IP

IP Address
0.0.0.0

Subnet Mask
255.255.255.0

Gateway
0.0.0.0

Static DNS Server
☐

Primary DNS

Secondary DNS
(Optional)

MAC Cloning
☐ Enabled

MAC Address (XX:XX:XX:XX:XX:XX)
00:00:00:00:00:00
Clone MAC

L2TP Settings

L2TP Account

L2TP Password

Please retype your password

L2TP Server (IP or Domain name)
0.0.0.0

MTU (546-1460)
1460

Maximum Idle Time (60-3600)
300 seconds (0: No timeout)

Connection Mode
keep-alive

L2TP Mode: The Layer two Tunneling Protocol (L2TP) is a method for implementing virtual private network.

Server: Specify IP Address of the L2TP Server.

(f) BigPond

BigPond is an Australian internet service provider and is a subsidiary of Telstra.

BigPond

BigPond Account	
BigPond Password	
Please retype your password	
BigPond Server (IP or Domain name)	
Request IP address	
MTU (576-1500)	1500
Static DNS Server	☐
Primary DNS	
Secondary DNS	(Optional)
MAC Cloning	☒ Enabled
MAC Address (XX:XX:XX:XX:XX:XX)	00:00:00:00:00:00 Clone MAC

User Name: Enter the User Name is provided by your ISP. This field is case-sensitive.

Password: Enter the Password is provided by your ISP. This field is case-sensitive.

Server IP: Enter the authenticating server IP address or host name.

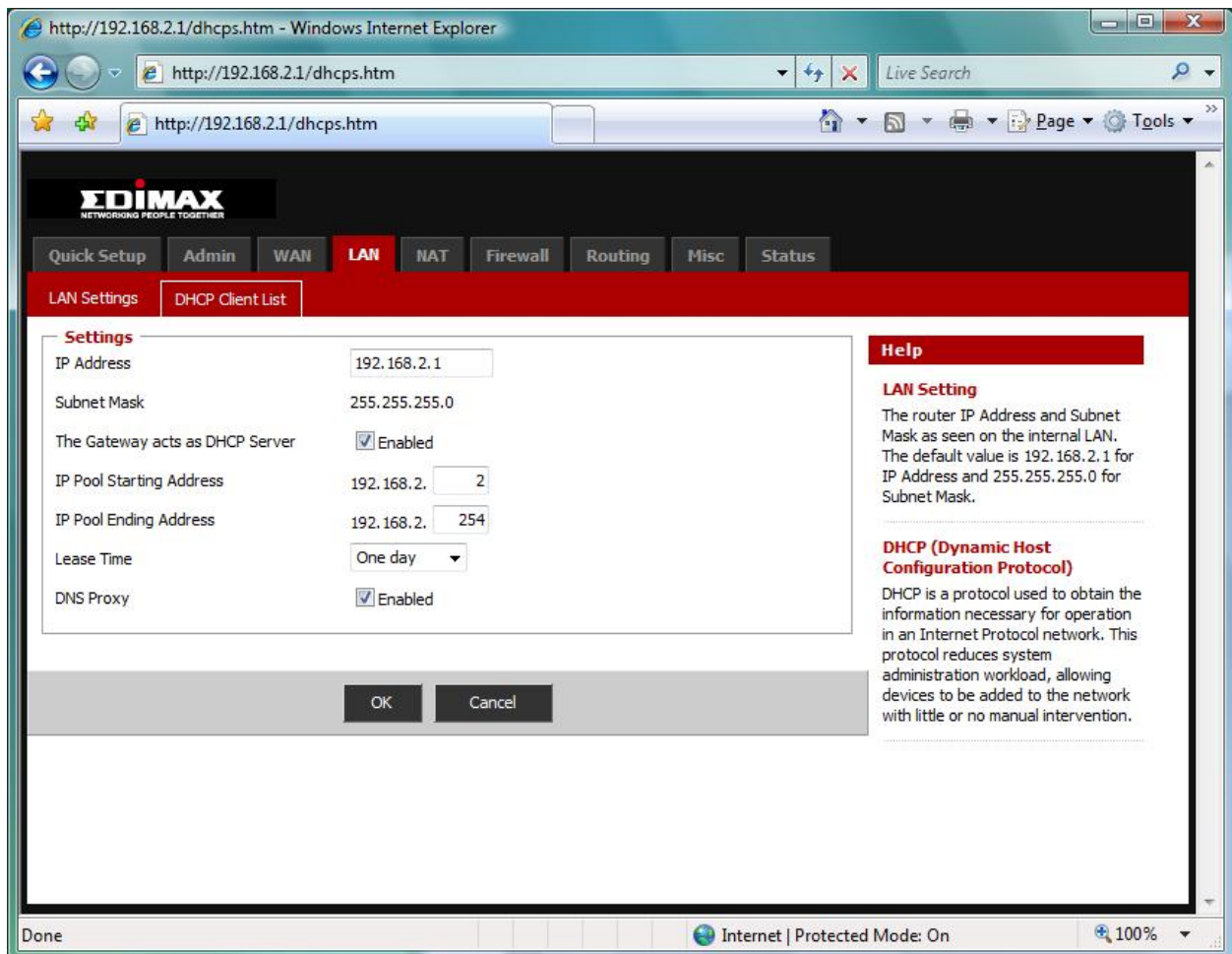
MTU: The normal MTU (Maximum Transmit Unit) value for most Ethernet networks is 1500 bytes. For some ISPs, you may need to modify the MTU. But this is rarely required, and should not be done unless you are sure it is necessary for your ISP connection.

3.5 LAN

3.5.1 LAN Settings

Configure the gateway address of the Broadband Router. To dynamically assign the IP address for client PCs, enable the DHCP Server, set the lease time, and then specify the address range.

Valid IP addresses consist of four numbers, and are separated by periods. The first three fields are the network portion, and can be from 0-255, while the last field is the host portion and can be from 1-254.



IP address: This is the router's LAN port IP address (Your LAN clients default gateway IP address)

Subnet Mask: Specify a Subnet Mask for your LAN segment.

The Gateway acts as DHCP Server: You can enable or disable the DHCP server.

IP Pool Starting Address: Enter the first address that should be assigned by the DHCP server.

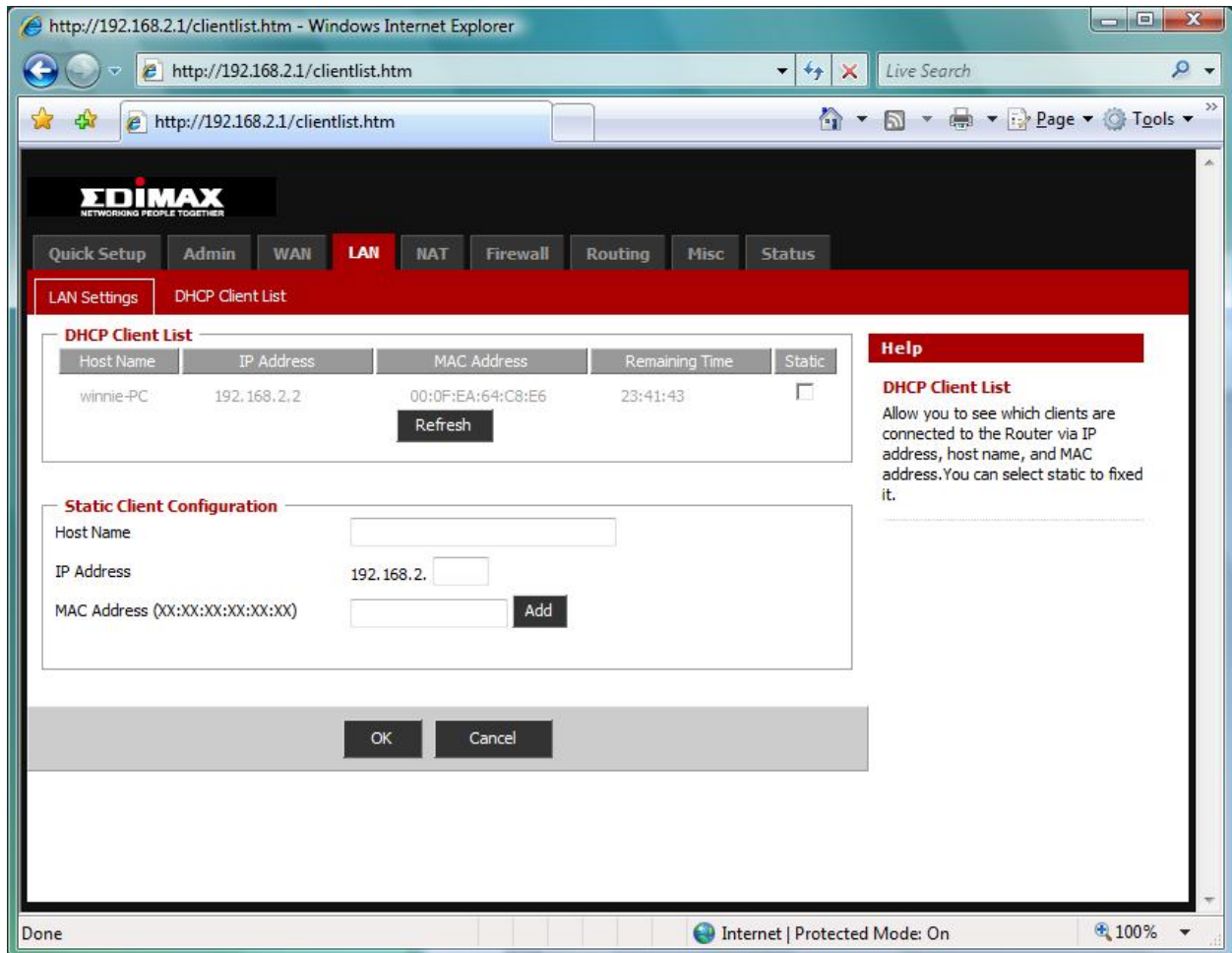
IP Pool Ending Address: Enter the last address that should be assigned by the DHCP server.

Lease Time: Enter the number of hours that a client can use the assigned IP address.

DNS Proxy: To enable or disable DNS Proxy (Domain Name Service).

3.5.2 DHCP Client List

The DHCP client list allows you to see which clients are connected to the Broadband Router via IP address, host name, and MAC address. You can select static to fix it.

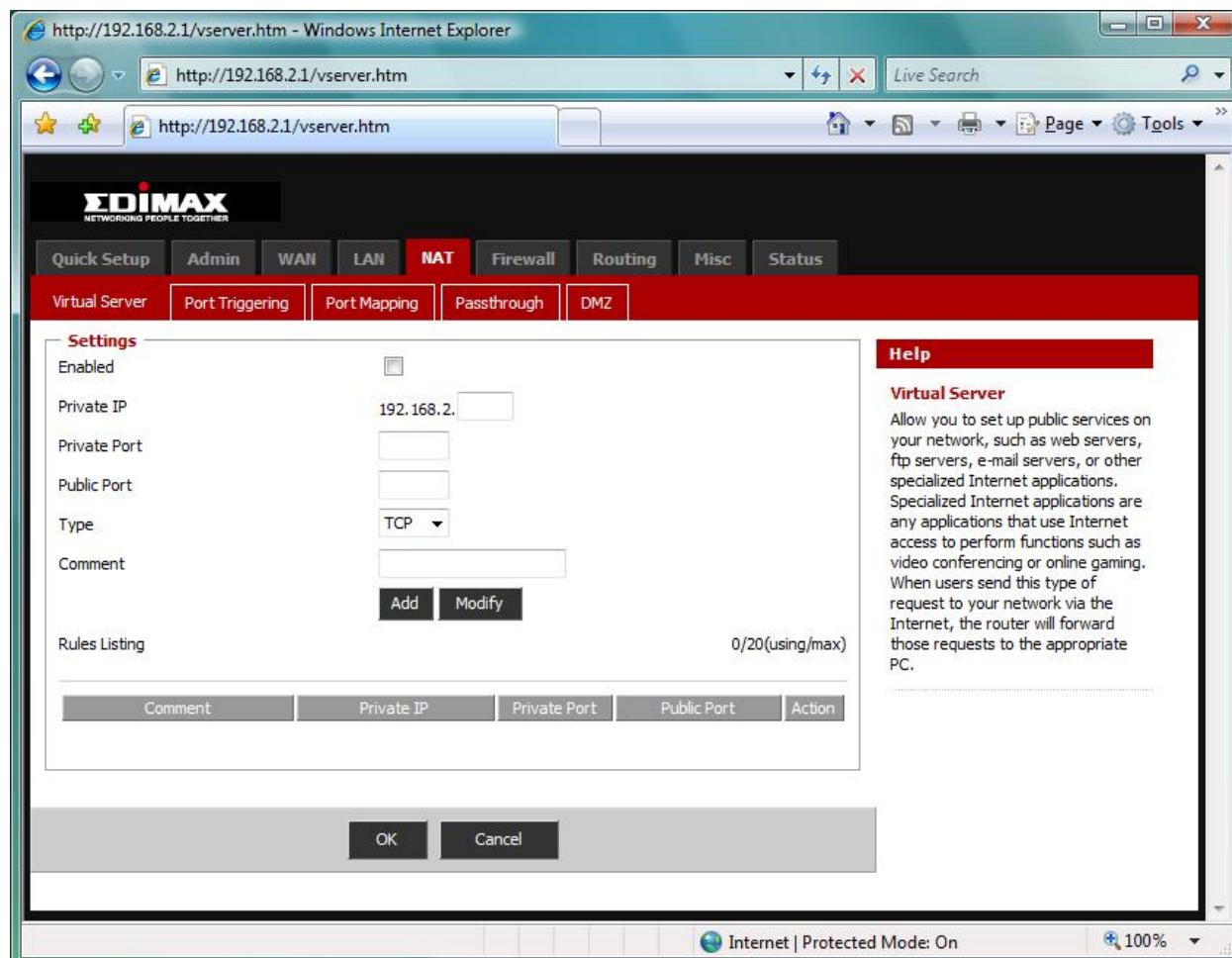


DHCP Client List: This page shows all DHCP clients (LAN PCs) currently connected to your network. The "DHCP Client List" displays the **IP** address and the **MAC** address and Remaining Time of each LAN Client. Use the **Refresh** button to get the most updated situation

3.6 NAT

3.6.1 Virtual Server

If you configure the Broadband Router as a virtual server, remote users accessing services such as Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP address. In other words, depending on the requested service (TCP/UDP port number), the Broadband Router redirects the external service request to the appropriate server.



Enabled: Enable the Virtual Server option.

Private IP: This is the LAN client/host IP address that the Public Port number packet will be sent to.

Private Port: This is the port number (of the above Private IP host) that the below Public Port number will be changed to when the packet enters your LAN (to the LAN Server/Client IP)

Type: Select the port number protocol type (TCP, UDP or both). If you are unsure, then leave it to the default both protocols.

Public Port: Enter the service (service/Internet application) port number from the Internet that will be re-directed to the above Private IP address host in your LAN.

Comment: The description of this setting.

3.6.2 Port Triggering

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications cannot work when Network Address Translation (NAT) is enabled. If you need to run

applications that require multiple connections,-specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

The screenshot displays the EDIMAX web interface for configuring Port Triggering. The main navigation bar includes tabs for Quick Setup, Admin, WAN, LAN, NAT (selected), Firewall, Routing, Misc, and Status. Below this, a sub-menu highlights Virtual Server, Port Triggering (selected), Port Mapping, Passthrough, and DMZ. The Port Triggering settings form contains the following elements:

- Settings:**
 - Enabled:** A checkbox that is currently unchecked.
 - Trigger Port:** A text input field.
 - Trigger Type:** A dropdown menu set to "TCP".
 - Public Port:** A text input field.
 - Type:** A dropdown menu set to "TCP".
 - Comment:** A text input field.
 - Buttons:** "Add" and "Modify" buttons.
- Rules Listing:** A table with the following structure:

Comment	Trigger Port	Public Port	Action
0/10(using/max)			
- Help:** A section titled "Port Triggering" explaining that it allows port forwarding without a fixed PC by setting rules for inbound traffic to arrive at a specific LAN host using different ports than those used for outbound traffic.

At the bottom of the form are "OK" and "Cancel" buttons. The browser window title is "http://192.168.2.1/porttrig.htm - Windows Internet Explorer".

Enable: Enable the Port Triggering function.

Trigger Port: This is the out going (Outbound) range of port numbers for this particular application.

Trigger Type: Select whether the outbound port protocol is "TCP", "UDP" or "Both".

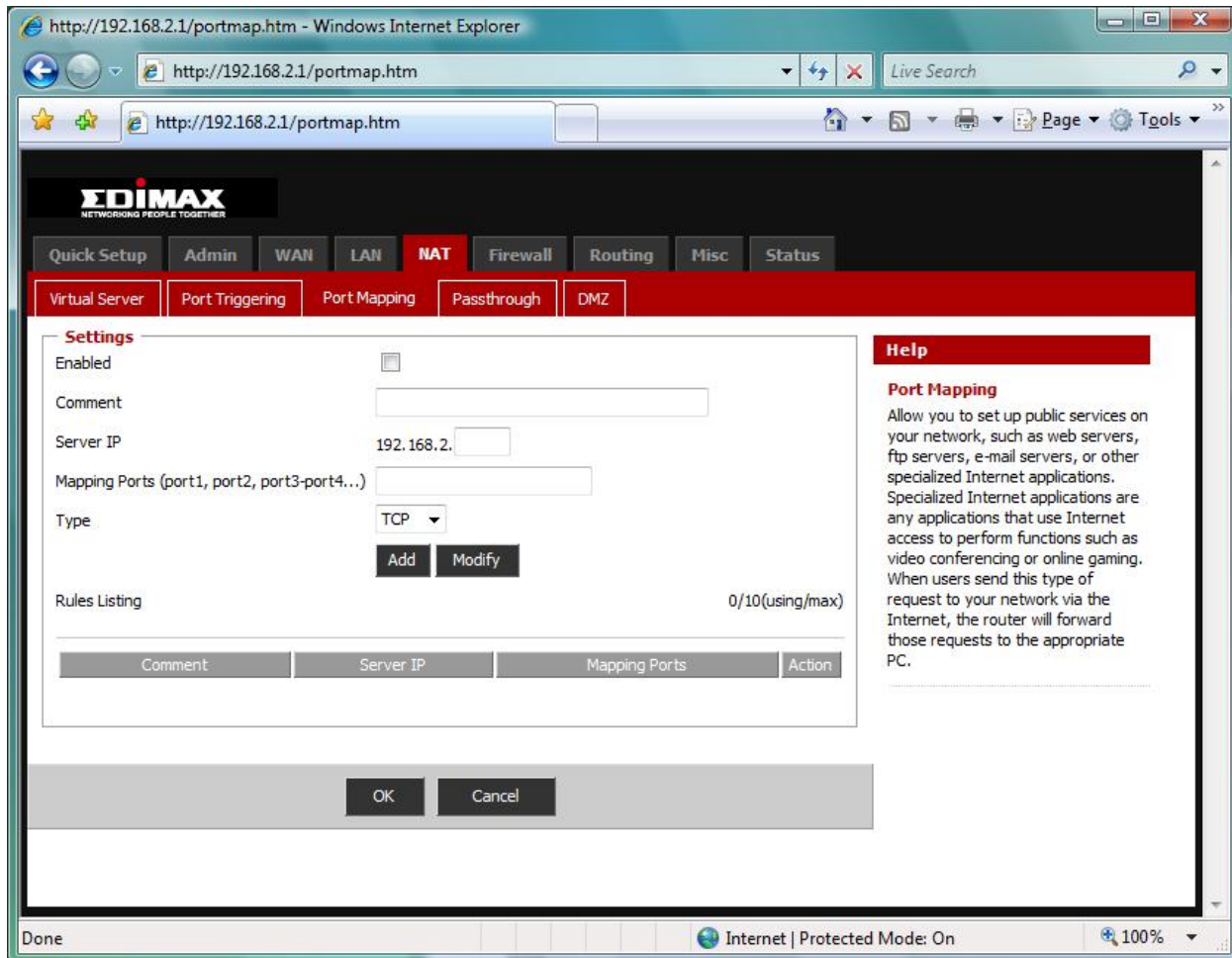
Public Port: Enter the In-coming (Inbound) port or port range for this type of applications(e.g. 2300-2400, 47624).

Type: Select the Inbound port protocol type: "TCP", "UDP" or "Both".

Comment: The description of this setting.

3.6.3 Port Mapping

This functionality allows one or more public IP addresses to be shared by multiple internal users. Enter the Public IP address you wish to share into the Global IP field. Enter a range of internal IP that will share the global IP.



Enabled: Enable the Port Mapping function.

Comment: The description of this setting.

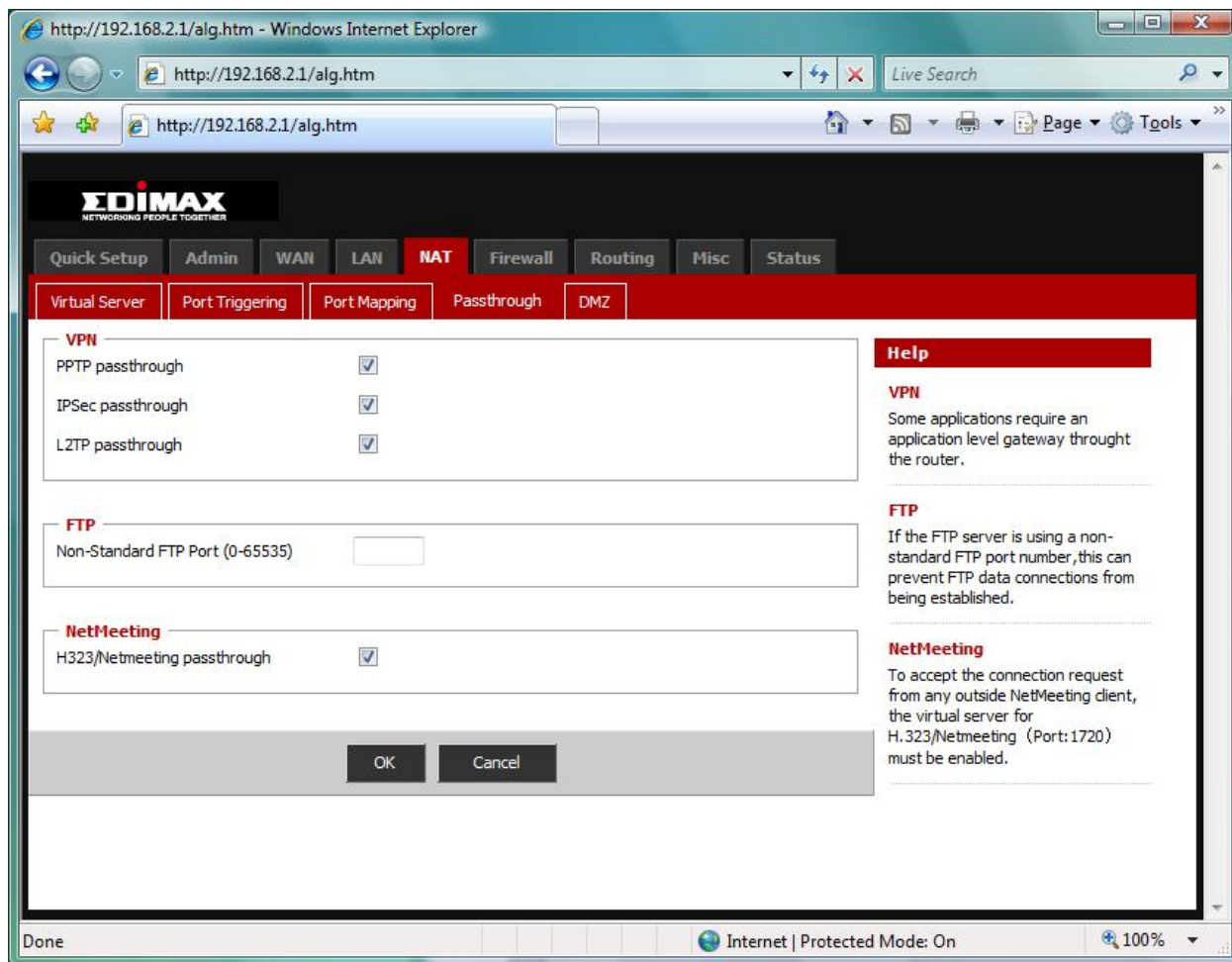
Server IP: Enter the NAT server IP address.

Mapping Ports: Enter the port address NAT server maps to.

Type: Select the Inbound port protocol type: "TCP", "UDP" or "Both".

3.6.4 Passthrough

Allow the broadband router correctly pass though the NAT gateway.



[VPN]

PPTP Passthrough: PPTP is a protocol that allows corporations to extend their own corporate network through private “tunnels” over the public Internet. Enable/Disable this protocol verification.

IPSec Passthrough: IPSec is a framework for a set of protocols for security at the network or packet processing layer of network verification.

L2TP Passthrough: L2TP is an extension to the Point-to-Point Protocol, which is an important component for VPNs. VPNs allow users and telecommuters to connect to their corporate intranets or extranets.

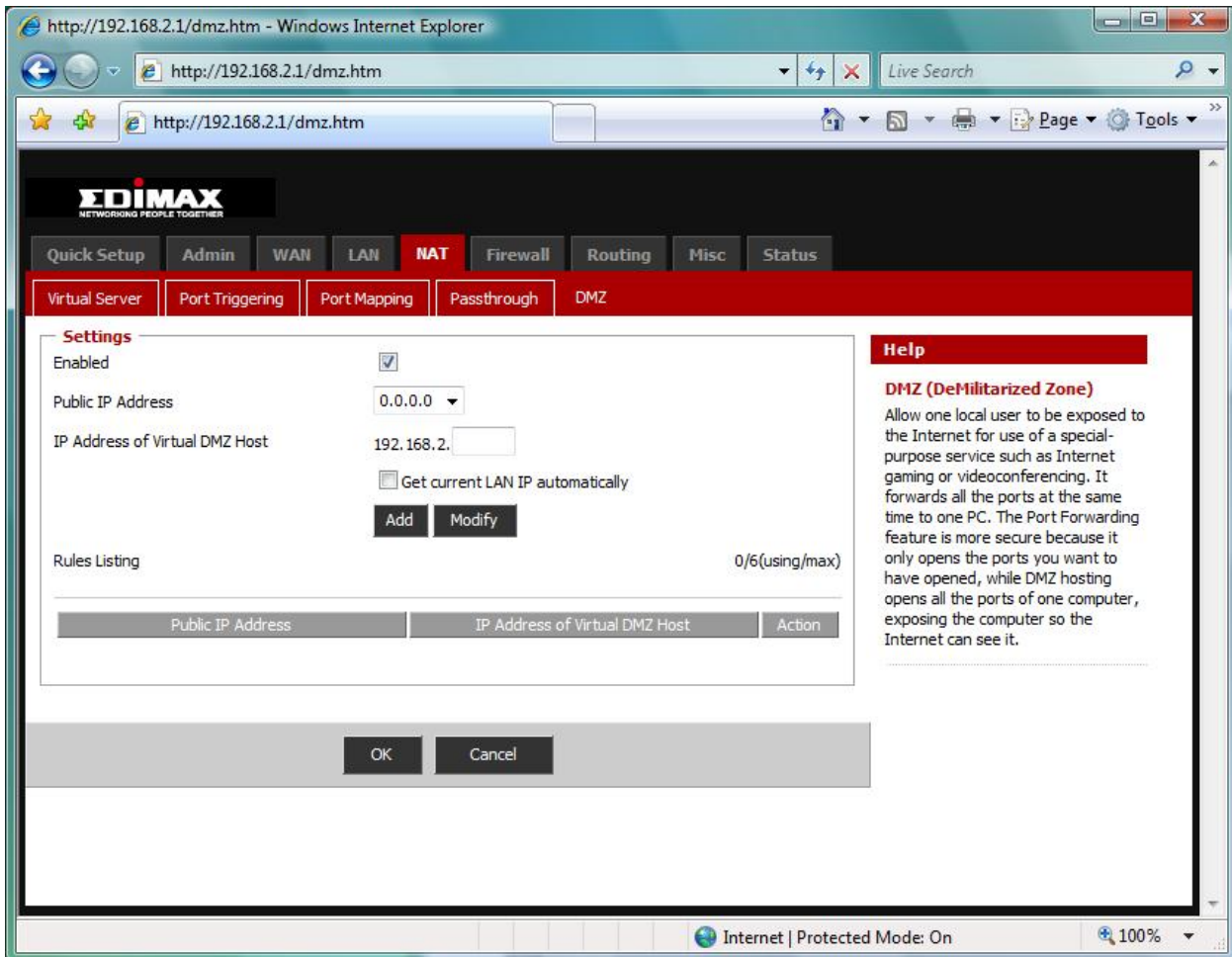
[FTP]

Non-Standard FTP Port (0-65535): If the FTP Server is using a non-Standard FTP port number, this can prevent FTP data connections from being established.

3.6.5 DMZ

If you have a client PC that cannot run Internet application properly from behind the NAT firewall or after configuring the Special Applications function, then you can open the client up to unrestricted two-way Internet access.

Enter the IP address of a DMZ host to this screen. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.



Enable: Enable/disable DMZ. (Default: Disable)

Public IP Address: The IP address of the WAN port or any other Public IP addresses given to you by your ISP.

IP Address of Virtual DMZ Host: Enter the DMZ host IP address.

3.7 Firewall

3.7.1 Firewall Options

The Broadband Router provides extensive firewall protection by restricting connection parameters to limit the risk of intrusion and defending against a wide array of common hacker attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server as a demilitarized zone (DMZ).

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Quick Setup Admin WAN LAN NAT **Firewall** Routing Misc Status

Firewall Options Client Filtering URL Filtering MAC Filtering

Settings

Enabled ☒

Options

Discard PING from WAN side ☐	IP Spoofing ☒
Deny PING to the Gateway ☐	Smurf Attack ☒
Detection Port Scan Packets ☒	Ping of Death ☒
Deny to Scan Security Port (113) ☒	Land Attack ☒
Discard NetBios Packets ☐	Snork Attack ☒
Deny Fragment Packets ☐	UDP Port Loop ☒
Disable ICMP Packets When Error is Encountered ☐	TCP Null Scan ☒
	TCP Syn Flood ☐
	Syn Threshold 300 packets per second (1-3000)

3.7.2 Client Filtering

You can filter Internet access for local clients based on IP addresses, application types, (i.e., HTTP port), and time of day. For example, this screen shows that clients in the address range 192.168.2.50-99 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.2.110-119 are blocked from browsing the Internet from Monday through Friday.

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Quick Setup Admin WAN LAN NAT **Firewall** Routing Misc Status

Firewall Options Client Filtering URL Filtering MAC Filtering

Settings

Enable Client Filter ☒

Enable ☐

IP Address ~

Port ~

Type

Block Time ☒ Always ☐ Block

Day ☐ SUN ☐ MON ☐ TUE ☐ WED ☐ THU ☐ FRI ☐ SAT

Time ~

Comment

Rules Listing 0/10(using/max)

IP Address	PortType	Block Time	Comment	Action
------------	----------	------------	---------	--------

3.7.3 URL Filtering

URL Filtering feature allowing you to prevent users from accessing specified websites on the basis of some policy. Default is "Disable URL Filter Function".

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Quick Setup Admin WAN LAN NAT **Firewall** Routing Misc Status

Firewall Options Client Filtering URL Filtering **MAC Filtering**

Settings

URL Filter Control: Deny Internet access for the following URL addresses

IP Address: 192.168.2. ~

URL filter string:

Enable: ☐

Add Modify

Rules Listing: 0/10(using/max)

IP Address	URL filter string	Action
------------	-------------------	--------

3.7.4 MAC Filtering

The MAC address filter let user to allow or block certain client PCs accessing the Internet based on MAC address.

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Quick Setup Admin WAN LAN NAT **Firewall** Routing Misc Status

Firewall Options Client Filtering URL Filtering **MAC Filtering**

Settings

MAC Address Control: Allow Internet access for the following MAC addresses

MAC Address (XX:XX:XX:XX:XX:XX):

Comment:

Add Modify

Rules Listing: 0/20(using/max)

MAC Address	Comment	Action
-------------	---------	--------

MAC Address Control: This function allows user to determine whether to filter out or accept the following MAC address connect to Internet.

MAC Address: Enter the MAC address to filter out or to accept.

3.8 Routing

3.8.1 Routing Table

The routing table displays the current routing information in system.



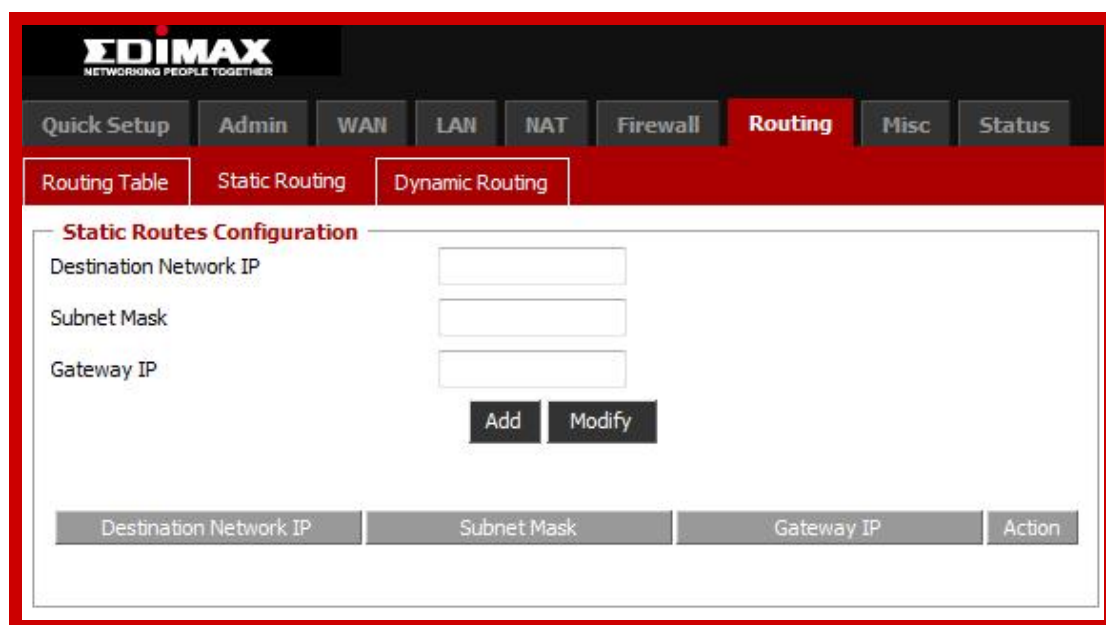
The screenshot shows the EDIMAX web interface with the 'Routing' tab selected. Under the 'Routing' tab, the 'Routing Table' sub-tab is active. The 'Routing Table List' section displays a table with the following data:

Destination Network IP	Subnet Mask	Gateway IP	Metric	Interface
192.168.2.0	255.255.255.0	192.168.2.0	0	eth0

Below the table is a 'Refresh' button.

3.8.2 Static Routing

A static route is a pre-determined pathway that network information must travel to reach a specific host or network.



The screenshot shows the EDIMAX web interface with the 'Routing' tab selected. Under the 'Routing' tab, the 'Static Routing' sub-tab is active. The 'Static Routes Configuration' section contains the following fields and buttons:

- Destination Network IP:
- Subnet Mask:
- Gateway IP:
- Buttons: Add, Modify

Below the configuration fields is a table with the following headers:

Destination Network IP	Subnet Mask	Gateway IP	Action
------------------------	-------------	------------	--------

Destination LAN IP: The network address of destination LAN.

Subnet Mask: The subnet mask of destination LAN.

Gateway: The next stop gateway of the path toward the destination LAN. This is the IP of the neighbor router that this router should communicate with on the path to the destination LAN.

3.8.3 Dynamic Routing

Dynamic Routing can be used to cache routers learned by routing protocols, thus allowing the automation of static routing maintenance. The router, using the **RIP** (Routing Information Protocol) protocol, determines the network packet's route based on the fewest number of hops between the source and the destination. In the working mode, router stands for normal rip router. Default gateway stand for router announces defaults route on both sides. Default is **Disable**.

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Quick Setup Admin WAN LAN NAT Firewall **Routing** Misc Status

Routing Table Static Routing Dynamic Routing

Dynamic Routing

Enable Dynamic Routing ☒

Working Mode Router

Listen Mode Disabled

Supply Mode Disabled

3.9 Misc

3.9.1 UPnP

UPnP (Universal Plug and Play) allows automatic discovery and configuration of equipment attached to your LAN. UPnP is supported by Windows ME, XP, or later. It provides compatibility with networking equipment, software and peripherals of the over 400 vendors that cooperate in the Plug and Play forum.

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Quick Setup Admin WAN LAN NAT Firewall Routing **Misc** Status

UPnP DDNS

Settings

Enable UPnP ☒ Enabled

Advertise Time (60-1800) 1800

Refresh Port Mapping Refresh

Remote Host	External Port	Internal Client	Internal Port	Protocol	Description
-------------	---------------	-----------------	---------------	----------	-------------

3.9.2 DDNS

DDNS (Dynamic DNS) provides you on the Internet with a method to tie their domain name to a computer or server. DDNS allows your domain name to follow your IP address automatically by having your DNS records changed when your IP address changes.

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Quick Setup Admin WAN LAN NAT Firewall Routing **Misc** Status

UPnP DDNS

Settings

Enable DDNS ☒ Enabled

Host Name

DDNS Server

User Name

Password

DDNS Update Interval (0-86400)Minutes

3.10 Status

3.10.1 Status

This status page displays the router's current status and configuration. All information is read-only.

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Quick Setup Admin WAN LAN NAT Firewall Routing Misc **Status**

Status Log

Gateway

IP Address	192.168.2.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled
NAT	Enabled
Firewall	Enabled

Internet

Cable/DSL	Disconnected
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Gateway	0.0.0.0
DNS	0.0.0.0
Secondary DNS	0.0.0.0
Domain Name	
Connection Type	Dynamic IP
Connection Time	00:00:00

Release Renew

Information

System Up Time	00:25:00
System Date	Thu Jan 01 08:25:00 1970
Connected Clients	1
Firmware Version	2.0 p50
LAN MAC Address	00:32:10:00:AD:01
WAN MAC Address	00:32:10:00:AD:02

3.10.2 Log

The log file keeps a running log of events and activities occurring on the device. You may want to save the log files by clicking on Log Setting. When the device is rebooted, the logs are automatically cleared.

System Log

First Page

Prev Page

Next Page

Last Page

No.	Time	Record
1	Thu Jan 01 08:00:00 1970	[System]System start
2	Thu Jan 01 08:00:00 1970	[System]Ver 2.0 p50 #6 Thu Jul 16 17:19:01 2009
3	Thu Jan 01 08:00:25 1970	[DHCP Server]RX DISCOVER by 00:0F:EA:64:C8:E6
4	Thu Jan 01 08:00:26 1970	[DHCP Server]TX OFFER of 192.168.2.2
5	Thu Jan 01 08:00:26 1970	[DHCP Server]RX REQUEST by 00:0F:EA:64:C8:E6
6	Thu Jan 01 08:00:26 1970	[DHCP Server]TX ACK to 192.168.2.2
7	Thu Jan 01 08:00:48 1970	[DHCP Server]RX INFORM by 192.168.2.2

Download

Clear

Settings

Refresh



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